

17

17. The system of claim 13, wherein the at least one depth image camera comprises a Microsoft Kinect.

18. The system of claim 13, wherein the walk characteristics data comprises at least one of walking speed, stride time, and stride length.

19. The system of claim 13, wherein the at least one processor, as part of the 3D points processing operation and the walking sequences identification operation, is further configured to, for each of a plurality of the tracked 3D data objects:

- determine a speed for the tracked 3D object over a time frame;
- compare the determined speed with a speed threshold;
- in response to the speed comparison indicating that the determined speed is greater than the speed threshold, assign a state indicative of walking to the tracked 3D data object
- while the tracked 3D data object is in the assigned walking state:
 - determine a walk straightness for the tracked 3D data object;
 - determine a walk length for the tracked 3D data object;
 - determine a walk duration for the tracked 3D data object;
 - save the tracked 3D data object in the memory as an identified walking sequence when (i) the determined walk straightness exceeds a straightness threshold, (ii) the determined walk length exceeds a walk length threshold, and (iii) the determined walk duration exceeds a walk duration threshold;
 - exclude from the identified walking sequence in the memory the 3D points from the tracked 3D object corresponding to a time period where the determined walk straightness is less than the walk straightness threshold;
 - repeat the speed determination operation and the speed comparison operation for the tracked 3D data object while the tracked 3D data object is in the assigned walking state; and
 - assign a state indicative of not walking to the tracked 3D data object in response to a determination that the

18

speed of the tracked 3D data object in the walking state has fallen below the speed threshold.

20. The system of claim 7, wherein the at least one processor, as part of the 3D points processing operation and the walking sequences identification operation, is further configured to, for each of a plurality of the tracked 3D data objects:

- determine a speed for the tracked 3D object over a time frame;
- compare the determined speed with a speed threshold;
- in response to the speed comparison indicating that the determined speed is greater than the speed threshold, assign a state indicative of walking to the tracked 3D data object
- while the tracked 3D data object is in the assigned walking state:
 - determine a walk straightness for the tracked 3D data object;
 - determine a walk length for the tracked 3D data object;
 - determine a walk duration for the tracked 3D data object;
 - save the tracked 3D data object in the memory as an identified walking sequence when (i) the determined walk straightness exceeds a straightness threshold, (ii) the determined walk length exceeds a walk length threshold, and (iii) the determined walk duration exceeds a walk duration threshold;
 - exclude from the identified walking sequence in the memory the 3D points from the tracked 3D object corresponding to a time period where the determined walk straightness is less than the walk straightness threshold;
 - repeat the speed determination operation and the speed comparison operation for the tracked 3D data object while the tracked 3D data object is in the assigned walking state; and
 - assign a state indicative of not walking to the tracked 3D data object in response to a determination that the speed of the tracked 3D data object in the walking state has fallen below the speed threshold.

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